

REMARKS

Claims 8 and 13 have been amended to incorporate the amendments suggested by the Examiner. In addition, claim 8 has been further amended to incorporate the recitation of claim 10 and Claim 13 has been further amended to incorporate the recitation of claim 15. Also, Claims 1, 8 and 13 have been amended to incorporate preparation criteria of the complex. Support is found on page 6, lines 9-18 of the application. Claims 4, 7, 11, 12, 16, 17 and 18 have been amended to more distinctly claim the invention. Support is found on page 8, lines 9-12 and throughout the application. Claims 10, 15 and 21-23 have been canceled. No new matter has been added.

Claims 1, 4, 5, 7, 8, 11, 13, 16 and 21-23 have been rejected under 35 USC 102(e) as anticipated by Angelopoulos et al. (6,193,909 B1). This rejection is respectfully traversed. Angelopoulos et al. (Col. 11, lines 9-19) discloses a mixture of polyaniline base and the monomeric dopant 2-acrylamido-2-methyl-1-propanesulfonic acid (AAMPSA) dissolved in organic solvent (NMP). The monomeric dopant has pendant cross-linkable side chains (acrylamide double bonds). At Col. 11, lines 54-61, a cross-linking agent, benzoyl peroxide, is added to the NMP solution of PANI-AAMPSA which is then spun into a film. Upon activation (heating), the benzoyl peroxide induces cross-linking of adjacent polyaniline polymer chains in the film via the cross-linkable side chains of the associated dopant (e.g. PANI-AAMPSA-AAMPSA-PANI). The cross-linking of the PANI polymer chains causes the film to become less permeable to water and thus less prone to dedoping by water (Col. 11, lines 60-61). Angelopoulos et al. also discloses an alternative method of incorporating monomeric AAMPSA into polyaniline by mixing an aqueous solution of monomeric aniline (ANI) and the monomeric dopant AAMPSA followed by polymerization of the aniline, but the corresponding PANI-AMMPSA product was insoluble (Col. 11, lines 48-53) and thus incapable of being cast from solution to form a film.

The present invention discloses a novel complex of polyaniline (PANI) and the polymeric dopant poly(2-acrylamido-2-methyl-1-propanesulfonic acid) (PAAMPSA). The invention discloses an aqueous solution of monomeric aniline (ANI) and the polymeric dopant PAAMPSA dissolved a polar solvent (water). The subsequent polymerization of ANI (to synthesize PANI) in the presence of PAAMPSA results in the formation of a soluble PANI-PAAMPSA complex (please see the present application at page 6, lines 5-21). The PAAMPSA dopant does not have pendant cross linkable side chains and no cross-linking agents were subsequently added to otherwise induce cross-linking of PANI polymer chains. There is no teaching in Angelopolous et al. of PANI-PAAMPSA or related complexes wherein PANI chains are not cross-linked. In addition, the present invention has a water

dispersible and/or water-soluble host polymer blended with the PANI-PAAMPSA complex. There is no teaching in Angelopoulos et al. of the addition of a host polymer to a PANI-PAAMPSA complex. Considering the above, Applicants respectfully request the Examiner to reconsider and withdraw the rejection.

Claims 1, 2, 4, 5, 7-18 and 21-23 were rejected under 35 USC 103(a) over Angelopoulos et al. (6,193,909 B1). This rejection is respectfully traversed. Applicants offer the arguments given hereinabove and request the Examiner to reconsider and withdraw the rejection.

Claim 21 is rejected under 35 USC 103(a) over Liu et al. (5,489,400). This rejection has been obviated by cancellation of claim 21.

In light of the foregoing, it is respectfully submitted that this case is now in form for allowance, which allowance is respectfully requested.

Respectfully submitted,



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Dated: November 18, 2003